

We claim:-

1. An aqueous alkenylsuccinic anhydride-containing polymer dispersion which is obtainable by miniemulsion polymerization of hydrophobic monoethylenically unsaturated monomers in the presence of alkenylsuccinic anhydrides.
2. An aqueous alkenylsuccinic anhydride-containing polymer dispersion according to claim 1, which is obtainable by emulsifying an organic phase which contains
  - at least one alkenylsuccinic anhydride and
  - at least one monoethylenically unsaturated hydrophobic monomerin dissolved form, in the presence of a surfactant in an aqueous phase with the aid of mechanical emulsification methods with formation of a miniemulsion having a particle size of the emulsified organic phase of not more than 500 nm, at least one of the two phases additionally containing a free radical polymerization initiator, or a polymerization initiator being added to the miniemulsion, and polymerizing the monomers of the miniemulsion.
3. An aqueous alkenylsuccinic anhydride-containing polymer dispersion according to claim 1 or 2, which is obtainable by emulsifying the organic phase in the aqueous phase to give a miniemulsion by the action of ultrasound or with the aid of high-pressure homogenizers.
4. An aqueous alkenylsuccinic anhydride-containing polymer dispersion according to any of claims 1 to 3, wherein the organic phase additionally contains a nonpolymerizable hydrophobic compound.
5. An aqueous alkenylsuccinic anhydride-containing polymer dispersion according to any of claims 1 to 4, wherein the organic phase consists of a solution, of a binary or polynary mixture and/or of a dispersion which contains
  - at least one C<sub>14</sub>- to C<sub>22</sub>-alkenylsuccinic anhydride,
  - at least one monomer from the group consisting of styrene, methylstyrene, C<sub>2</sub>- to C<sub>28</sub>-olefins, esters of monoethylenically unsaturated carboxylic acids of 3 to 5 carbon atoms and monohydric alcohols of 1 to 22 carbon atoms, vinyl esters of C<sub>1</sub>- to C<sub>18</sub>-carboxylic acids, acrylonitrile and methacrylonitrile, and
  - at least one hydrocarbon, an alcohol of 10 to 24 carbon atoms, hydrophobic polymers having molar masses Mw of < 10 000, tetraalkylsilanes and/or mixtures of said compounds.

6. An aqueous alkenylsuccinic anhydride-containing polymer dispersion according to any of claims 1 to 5, wherein the miniemulsion polymerization is additionally carried out in the presence of at least one water-soluble and/or water-swella-  
5 polysaccharide.
7. An aqueous alkenylsuccinic anhydride-containing polymer dispersion according to any of claims 1 to 6, wherein the miniemulsion polymerization is additionally carried out in the presence of at least one alkyl diketene.
- 10 8. A process for the preparation of aqueous alkenylsuccinic anhydride-containing polymer dispersions, wherein the hydrophobic monomers are polymerized by a miniemulsion polymerization method in the presence of at least one alkenylsuccinic anhydride.
- 15 9. A process according to claim 8, wherein the miniemulsion polymerization is additionally carried out in the presence of at least one water-soluble and/or water-swella-  
20 polysaccharide.
10. A process for the preparation of aqueous alkenylsuccinic anhydride-containing polymer dispersions according to claim 8, wherein an organic phase which contains  
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  - at least one alkenylsuccinic anhydride and
  - at least one monoethylenically unsaturated hydrophobic monomer  
in dissolved form is emulsified in the presence of a surfactant in an aqueous phase with the aid of mechanical emulsification apparatuses with formation of a miniemulsion having a particle size of the emulsified organic phase of not more than 500 nm, and the monomers of the miniemulsion are polymerized in the  
30 presence of at least one water-soluble and/or water-swella-  
polysaccharide and at least one polymerization initiator.
11. A process according to claim 9 or 10, wherein the miniemulsion is mixed with an aqueous solution which contains a water-soluble starch, and the mixture is  
35 polymerized in the presence of at least one polymerization initiator at up to 40°C.
12. A process according to any of claims 8 to 11, wherein the miniemulsion is mixed with an aqueous solution which contains a degraded starch in dissolved form.
- 40 13. A process according to any of claims 8 to 12, wherein the miniemulsion is polymerized continuously or batchwise in the presence of a water-soluble and/or water-swella-  
polysaccharide.

14. A process according to any of claims 8 to 13, wherein the polymerization is carried out at from -20 to 40°C.
- 5 15. A process according to any of claims 8 to 14, wherein the miniemulsion polymerization is additionally carried out in the presence of an alkyldiketene.
16. A process according to any of claims 8 to 15, wherein an organic phase which contains
- 10 - at least one alkenylsuccinic anhydride and at least one alkyldiketene and  
- at least one monoethylenically unsaturated hydrophobic monomer
- 15 in dissolved form is emulsified in the presence of a surfactant in an aqueous phase which contains at least one water-soluble polysaccharide with the aid of mechanical emulsification apparatuses with formation of a miniemulsion having a particle size of the emulsified organic phase of not more than 500 nm, and the monomers of the miniemulsion are polymerized in the presence of at least one polymerization initiator.
- 20 17. A process according to claim 16, wherein the water-soluble polysaccharide used is a degraded starch.
- 25 18. The use of an aqueous alkenylsuccinic anhydride-containing polymer dispersion according to any of claims 1 to 7 as an engine size and surface size for paper and for imparting water repellency to leather, natural and/or synthetic fibers and textiles.